

Serial No.: 09/577,616
Atty. Docket No.: P65350US0

IN THE CLAIMS:

Please cancel claims 5-9 without prejudice or disclaimer,
the status of the claims being as follows:

1. (Previously Presented) An extruder die head, comprising a central annular channel defined by an inside wall and an outside wall, which is provided with an annular outlet die slit, and into said inside and outside walls empty internal and external annular slits, respectively, which feed polymer melts and which form smaller diameter openings of truncated channels, formed between internal and external shells of stacked, conical insert members, said annular slits feeding said polymer melts from said truncated channels into said inside and outside walls defining said central annular channel, and said internal and external shells of said conical insert members, respectively, having mating interior and mating exterior conical surfaces which define two counter rotating spiral channels, whose depths taper off in a direction of said annular outlet die slit, said conical insert members including an inside bottom ring and an outside bottom ring, said inside bottom ring having a cylindrical outer wall and a conical inner wall, and said outside bottom ring having a cylindrical inner wall and a conical outer wall, said cylindrical walls being in abutment to define therebetween a feed channel communicating with said central

Serial No.: 09/577,616
Atty. Docket No.: P65350US0

annular channel, and said inside bottom ring and said outside bottom ring having a generally triangular cross-section.

2. (Previously Presented) The extruder head, as claimed in claim 1, wherein a first one of said spiral channels is formed on said conical outer wall of said outside bottom ring, and a second one of said spiral channels is formed on said conical inner wall of said inside bottom ring.

3. (Previously Presented) The extruder head, as claimed in claim 1, wherein corresponding pairs of said internal and external annular slits lie in a same radial plane.

4. (Previously Presented) The extruder head, as claimed in claim 1, wherein said spiral channels further include spiral grooves on said cylindrical outer wall of said inside bottom ring.

Claims 5-10. (Canceled)

11. (Previously Presented) An extruder die head, comprising: a plurality of external conical insert members stacked upon one another to form an outside wall, mating surfaces of

Serial No.: 09/577,616
Atty. Docket No.: P65350US0

adjacent external conical insert members forming outer truncated conical melt feed channels that feed polymer melts emptying into said outside wall;

a plurality of internal conical insert members stacked upon one another to form an inside wall, mating surfaces of adjacent internal conical insert members forming inner truncated conical melt feed channels that feed polymer melts emptying into said inside wall;

said inside wall and said outside wall defining therebetween a central annular channel opening into an annular outlet die slit;

said plurality of internal conical insert members including an inside bottom ring having a cylindrical outer wall and a conical inner wall, said cylindrical and conical walls having first and second spiral grooves therein, respectively; and

said plurality of external conical insert members including an outside bottom ring having a cylindrical inner wall and a conical outer wall having third spiral grooves therein that counter-rotate with said second spiral grooves, said cylindrical inner wall in abutment with said cylindrical outer wall of said inside bottom ring to define a feed channel therebetween in communication with said central annular channel.

Serial No.: 09/577,616
Atty. Docket No.: P65350US0

12. (Previously Presented) The extruder die head as claimed in claim 11, wherein said plurality of external conical insert members and said plurality of internal conical insert members are in alignment to form corresponding pairs, each corresponding pair lying in a common radial plane, respectively.

13. (Previously Presented) The extruder die head as claimed in claim 11, wherein said internal truncated conical channels and said external truncated conical channels slope in opposite directions at approximately a same angle to said central annular channel.

14. (Previously Presented) The extruder die head as claimed in claim 11, wherein a depth of said first, second and third spiral grooves tapers off in a direction toward said central annular channel.

15. (Previously Presented) The extruder die head as claimed in claim 11, wherein said internal and external truncated conical channels are substantially concentrically spaced around said central annular channel.

Serial No.: 09/577,616
Atty. Docket No.: P65350US0

16. (Previously Presented) The extruder die head as claimed in claim 11, wherein said mating surfaces of said adjacent external conical insert members and said mating surfaces of said adjacent internal conical insert members include spiral grooves.

17. (Previously Presented) The extruder die head as claimed in claim 11, wherein said inside and outside bottom rings have a triangular cross-section.